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Maine Department of Environmental Protection

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NOTE TO REVIEWER: The appendix below would be new to Chapter 500. The original text of Appendix B was taken from an appendix to the current the Maine Construction General Permit (MCGP). Changes (shown in underline/strike) include standards appropriate for Stormwater and Site Law projects, or changes considered necessary to future MCGP standards. Many of these changes appeared in previous draft revisions to Chapter 500.

APPENDIX B. Inspection and maintenance

(1) During construction

(a) Inspection and maintenance. Inspect disturbed and impervious areas, and erosion and stormwater control measures, areas used for storage that are exposed to precipitation, and locations where vehicles enter or exit the parcel at least once a week and before and after a storm event, prior to completion of permanent stabilization. A person with knowledge of erosion and stormwater control, including the standards in this permit and any departmental companion document to this permit, must conduct the inspection. This person must be identified in the inspection log. If best management practices (BMPs) need to be modified or if additional BMPs are necessary, implementation must be completed within 7 calendar days and prior to any storm event (rainfall). All measures must be maintained in effective operating condition until areas are permanently stabilized.

(b)(2)-Inspection log (report). A log (report) must be kept summarizing the scope of the inspection, name(s) and qualifications of the personnel making the inspection, the date(s) of the inspection, and major observations relating to operation of erosion and sedimentation controls and pollution prevention measures. Major observations must include: BMPs that need to be maintained; location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location; and location(s) where additional BMPs are needed that did not exist at the time of inspection. Follow-up to correct deficiencies or enhance controls must also be indicated in the log and dated, including what action was taken and when.

(2) After construction (Site Law and Stormwater Law projects only)

(a) Maintenance log. A log must be kept of inspections of and maintenance for the site's stormwater management system and permanent erosion controls. At a minimum, the inspection and maintenance log must include the following items.

(i) List of facilities to be maintained. List the stormwater management measures and erosion controls that are to be inspected and maintained (e.g. "parking lot catch basins").

(ii) List of inspection and maintenance items. For each stormwater management and erosion control measure, provide a list of the inspection items and maintenance tasks required for each (e.g. "remove accumulated sediments in basin sumps").

(iii) Task frequency. For each inspection item or maintenance task, indicate the required frequency of performing each (e.g. "annually in early spring").

Fill out the maintenance log by giving the date on which the inspection or maintenance task was performed, a description of the inspection findings or maintenance work completed, and the name of the inspector or maintenance personnel doing the work. If a maintenance task

requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed after their removal.

(b) Maintenance tasks. The following areas, structures, and measures must be inspected and maintained. The basic inspection items and maintenance tasks are given for each.

Note: Expanded and more-detailed descriptions for many of these may be found in the Maine DEP's *Stormwater Management for Maine: Best Management Practices*.

(i) Vegetated Areas. Inspect vegetated areas, particularly slopes and embankments, early in the growing season to identify active or potential erosion problems. Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows. See permanent stabilization standards in Appendix A(4).

(ii) Stormwater channels. Inspect ditches, swales and other open stormwater channels in the spring and late fall to remove any obstructions to flow, remove accumulated sediments and debris, to control vegetated growth that could obstruct flow, and to repair any erosion of the ditch lining. Vegetated ditches must be mowed annually or otherwise maintained to control the growth of woody vegetation. Any woody vegetation attempting to grow up through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable. If the ditch has a riprap lining, replace riprap on areas where the underlying filter fabric is showing through the stone or where stones have dislodged. The channel must receive adequate routine maintenance to maintain capacity and prevent or correct any erosion of the channel's bottom or sideslopes.

(iii) Culverts. Inspect culverts in the spring and late fall to remove any obstructions to flow; remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit; and to repair any erosion damage at the culvert's inlet and outlet.

(iv) Catch-basin systems. Inspect and clean-out catch basins at least once a year, preferably in early spring. Clean-out should include the removal and legal disposal of any accumulated sediments and debris at the bottom of the basin. If the basin outlet is designed to trap floatable materials, then remove the floating debris and any floating oils (using oil-absorptive pads).

(v) Roadways and parking surfaces. Clear accumulations of winter sand in parking lots and along roadways at least once a year. Accumulations on pavement may be removed by pavement sweeping. Accumulations of sand along road shoulders may be removed either by power brushing (for vegetated shoulders) or by grading the sand into the shoulder (for gravel shoulders). Grading of gravel roads, or grading of the gravel shoulders of gravel or paved roads, must be routinely performed to ensure that stormwater drains immediately off the road surface to adjacent buffer areas or stable ditches, and is not impeded by accumulations of graded material on the road shoulder or by excavation of false ditches in the shoulder. If water bars or open-top culverts are used to divert runoff from road surfaces, clean-out any sediments within or at the outlet of these structures so to restore their function.

(vi) Buffers. Inspect resource and treatment buffers at least once a year for evidence of erosion, concentrating flow, and encroachment by development. Management of a buffer's vegetation must be consistent with the requirements in any deed restrictions for the buffers. Wooded buffers must remain fully wooded and have no disturbance to the duff layer. Vegetation in

non-wooded buffers must be cut no more than three times per year and no shorter than six inches. Erosion within a buffer must be repaired as soon as practicable. If flows are concentrating within the buffer, site grading, level spreaders, or ditch turn-outs must be used to ensure a more even distribution of flow into the buffer. Check downslope of all spreaders and turn-outs for erosion. If erosion is present, adjust or modify the spreader's or turnout's lip to ensure a better distribution of flow into the buffer. Clean-out any accumulation of sediment within the spreader bays or turn-out pools.

(vii) Stormwater detention and retention facilities. Each detention basin or retention pond built for the control or treatment of stormwater must have a maintenance plan developed by the facility's design engineer. At a minimum, the maintenance must include the tasks listed below.

(AA) Embankment inspection and maintenance. Complete yearly inspections of the impoundment's embankments to identify excessive settlement, slope erosion, internal piping, and downstream swamping. Evidence of any of these conditions must be reviewed by a professional engineer as soon as practicable. Mow or otherwise control vegetation on the embankment to prevent the growth of woody vegetation.

(BB) Outlet inspection and clean-out. Complete semi-annual inspection of the impoundment's outlet control structure to identify broken seals, obstructed orifices, and plugged trash racks. Remove and dispose of any sediments and debris within the control structure. Repair any damage to trash racks or debris guards as soon as practicable.

(CC) Spillway maintenance. Complete yearly inspections of the impoundment's emergency spillway. Maintenance must include the mowing of vegetated spillways to control woody vegetation and the replacement of any dislodged stone in riprap spillways.

(DD) Sediment removal and disposal. Provide for the occasional removal and disposal of accumulated sediments within the impoundment and the impoundment's forebay. The clean-out frequency ranges from five to twenty years, depending on the sediment load to the pond or basin.

(viii) Runoff infiltration facilities. Each infiltration facility built for the control or treatment of stormwater must have a maintenance plan. The plan must be approved by the department for a project permitted under the Site Law. The maintenance plan must include the tasks listed below.

(AA) Clean-out pretreatment measures. Inspect and clean-out any pre-treatment measures installed to limit the amount of sediment and hydrocarbons entering the infiltration measure. This must be done at least semi-annually to limit the wash-out of captured sediments and other pollutants to the infiltration measure during large storms.

(BB) Infiltration rehabilitation. Rehabilitation of infiltration measures is generally necessary every three to ten years, depending on the soil conditions, infiltration surface treatment, and sediment load to the infiltration measure. Generally, renewal is necessary if the infiltration measure fails to drain within 72 hours after a rainfall of one-half inch or more. For sod infiltration basins, rehabilitation can usually be accomplished through the tilling and replanting of the soil. Rock-lined basins or stone-filled trenches will usually

require removal of the stone, replacement of any underlying filter fabric, and the tilling or removal of the underlying soil.

(CC) Sediment removal and disposal. Provide for the occasional removal and disposal of accumulated sediments within the infiltration area. The clean-out frequency ranges from two to ten years, depending on the sediment load to the infiltration measure.

(ix) Proprietary treatment devices. Contract with a third-party for the removal of accumulated sediments, oils, and debris within the device and the replacement of any absorptive filters. The frequency of sediment clean-out and filter replacements must be consistent with the unit's storage capacity and the estimated pollutant load from the contributing drainage area. This clean-out frequency is usually established by the manufacturer of the proprietary system when sizing the device for the project.

Note: Other practices and measures. Contact staff in the department's Division of Watershed Management for assistance developing inspection and maintenance requirements for other drainage control and runoff treatment measures installed on the site.

Note: The maintenance needs for most measures may be found in the Maine DEP's *Stormwater Management for Maine: Best Management Practices*.

(3) Maintenance contract (Site Law and Stormwater Law projects only). The applicant must demonstrate through submission of an executable contract with a qualified professional that required maintenance will be performed as required.

(4) Certification (Site Law and Stormwater Law projects only). Within six months of the expiration of each five-year interval from the date of issuance of the permit, the permittee shall certify the following the department.

(a) Identification and repair of erosion problems. All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.

(b) Inspection and repair of stormwater facilities. All aspects of the stormwater quantity and quality control system have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the facilities.

(c) Maintenance. The erosion and stormwater maintenance plan for the site is being implemented as written, or modifications to the plan have been submitted to and approved by the department.

(5) Additional requirements (Site Law and Stormwater Law projects only). Additional requirements may be applied on a site-specific basis.